

# World Resources Company

Form: FM-M01

## RECYCLABLE MATERIAL PROFILE

EXHIBIT A

Generator Name: Alaskan Copper Works

Company I.D. #: 22149-001-01

### A. Generator Information

1. Address: 3200 Sixth Avenue South

Seattle

WA

98124

3. Material EPA Waste Code: F006

4. Generator's EPA I.D. Number: WAD980738546

5. Generator's State I.D. Number:

2. Contact: Gerald Thompson

Title: Environmental Assistant

### B. Recyclable Material Characteristics

1. Color(s): Brown

6. Texture (similar to)

☒ Wet Clay

☐ Dry Clay

☐ Sand

☐ Powder

☐ Other

7. Appearance

☒ Homogenous

☐ Bilayered

☐ Multilayered

9. Free Liquids (EPA SW 846, Method 9095)

☒ Not Present

☐ Present

2. Odor (none, mild, strong)

None

Description of Odor:

10. Debris

☒ Not Present

☐ Present

11. Reactivity

☒ Not Reactive

☐ Reactive

3. Moisture (wet, damp, dry)

Wet

Percent Solids: 21.4

8. Organic Vapors

☒ Not Present (< 1ppm) If present, identify compounds and amount in ppm on a wet basis.

☐ Present

12. Radionuclides (ASTM D5928-96)

☒ Not Detected

☐ Detected

4. pH

(EPA SW 846, method 9040/9045)

pH: 8.46 @ 22.6°C

5. Ignitability

(40 CFR §261.21)

☒ PASS

☐ FAIL

☒ Pass

☐ Fail

13. Cyanide Gas HCN

☒ Not Detected

☐ Detected \_\_\_\_\_ ppm

### C. Analytical Data

(Content on a dry weight basis in ppm or %)

| Constituent *  | Content         | Qualifier         | Constituent *               | Content | Qualifier      |
|--|-----------------|-------------------|-----------------------------|---------|----------------|
| 1. Aluminum <sup>1</sup>                               | Al              | 6301.5 ppm L3     | 19. Magnesium <sup>1</sup>  | Mg      | 1739.4 ppm M1  |
| 2. Antimony <sup>1,†</sup>                             | Sb              | 21.6 ppm          | 20. Manganese <sup>1</sup>  | Mn      | 5932.5 ppm     |
| 3. Arsenic <sup>1,†</sup>                              | As              | 52.0 ppm          | 21. Mercury <sup>1</sup>    | Hg      | < 5.8 ppm      |
| 4. Barium <sup>1,†</sup>                               | Ba              | 69.5 ppm          | 22. Nickel <sup>1,†</sup>   | Ni      | 66611.7 ppm M1 |
| 5. Beryllium <sup>1,†</sup>                            | Be              | < 10.0 ppm        | 23. Selenium <sup>1,†</sup> | Se      | < 50.0 ppm     |
| 6. Bismuth <sup>1</sup>                                | Bi              | 73.7 ppm          | 24. Silver <sup>1,†</sup>   | Ag      | < 5.0 ppm M3   |
| 7. Cadmium <sup>1,†</sup>                              | Cd              | < 20.0 ppm        | 25. Thallium <sup>1,†</sup> | Tl      | 20.5 ppm       |
| 8. Calcium <sup>1</sup>                                | Ca              | 9999.0 ppm L3, M3 | 26. Tin <sup>1,†</sup>      | Sn      | < 100.0 ppm M3 |
| 9. Chloride <sup>4</sup>                               | Cl <sup>-</sup> | 2.31 %            | 27. Zinc <sup>1,†</sup>     | Zn      | 648.0 ppm M2   |
| 10. Chromium, Hexavalent <sup>2</sup> Cr <sup>+6</sup> |                 | 2320.4 ppm        |                             |         |                |
| 11. Chromium, Total <sup>1,†</sup>                     | Cr              | 58053.1 ppm       |                             |         |                |
| 12. Cobalt <sup>1</sup>                                | Co              | 880.4 ppm         |                             |         |                |
| 13. Copper <sup>1,†</sup>                              | Cu              | 44695.7 ppm M3    |                             |         |                |
| 14. Cyanide, Amenable <sup>3,†</sup>                   | CN <sup>-</sup> | not analyzed      |                             |         |                |
| 15. Cyanide, Total <sup>3,†</sup>                      | CN <sup>-</sup> | < 46.7 ppm Z3     |                             |         |                |
| 16. Fluoride <sup>4</sup>                              | F <sup>-</sup>  | 0.82 %            |                             |         |                |
| 17. Iron <sup>1</sup>                                  | Fe              | 247784.0 ppm      |                             |         |                |
| 18. Lead <sup>1,†</sup>                                | Pb              | 96.6 ppm          |                             |         |                |

#### \* Analytical Procedure References

1. EPA Method SW846 3050 / 6010 (Digestion / Analysis)
2. EPA Method SW846 3060 / 7196 (Extraction / Analysis)
3. EPA Method SW846 9010 / 9213 or 9014 (Distillation / Analysis)
4. HNO<sub>3</sub> or H<sub>2</sub>O<sub>2</sub> / EPA Method SW846 9056 (Digestion / Analysis)

† Licensed Constituent

### D. Certification

I hereby certify that all information submitted in this profile is complete and accurate to the best of my knowledge and belief.

Signed: Bryan Roberts

Date: August 22, 2011

Title: Laboratory Manager

AZ DHS #: AZ0586

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## QA/QC DATA

**EXHIBIT A**

Generator Name: Alaskan Copper Works

Company I.D. #: 22149-001-01

QA/QC Criteria: All analyses met method criteria unless otherwise noted.

### Explanation of Data Qualifiers:

|    |  |
|----|--|
| M3 | The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was acceptable. |
| M1 | Matrix spike recovery was high; the associated blank spike recovery was acceptable.  |
| Z3 | The duplicate sample did not meet method acceptance limits due to the lack of sample homogeneity.  |
| M2 | Matrix spike recovery was low; the associated blank spike recovery was acceptable.   |
| L3 | The associated blank spike recovery was above method acceptance limits.  |

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## SAMPLE COLLECTION & ANALYSIS COMPLETION DATES

EXHIBIT A

Generator Name: Alaskan Copper Works

Company I.D. #: 22149-001-01

| Constituent              |                  | Sample Date      | Completion Date  | Sample Technician |
|--------------------------|------------------|------------------|------------------|-------------------|
| 1. pH                    |                  | 02/17/2011 13:19 | 02/17/2011 13:19 | LEONEL GARCIA     |
| 2. Aluminum              | Al               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 3. Antimony              | Sb               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 4. Arsenic               | As               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 5. Barium                | Ba               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 6. Beryllium             | Be               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 7. Bismuth               | Bi               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 8. Cadmium               | Cd               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 9. Calcium               | Ca               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 10. Chloride             | Cl <sup>-</sup>  | 02/17/2011 13:19 | 02/24/2011 12:00 | LEONEL GARCIA     |
| 11. Chromium, Hexavalent | Cr <sup>+6</sup> | 02/17/2011 13:19 | 03/11/2011 15:00 | LEONEL GARCIA     |
| 12. Chromium, Total      | Cr               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 13. Cobalt               | Co               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 14. Copper               | Cu               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 15. Cyanide, Amenable    | CN <sup>-</sup>  |                  |                  |                   |
| 16. Cyanide, Total       | CN <sup>-</sup>  | 02/17/2011 13:19 | 03/04/2011 12:00 | LEONEL GARCIA     |
| 17. Fluoride             | F <sup>-</sup>   | 02/17/2011 13:19 | 02/24/2011 12:00 | LEONEL GARCIA     |
| 18. Iron                 | Fe               | 02/17/2011 13:19 | 08/10/2011 14:40 | LEONEL GARCIA     |
| 19. Lead                 | Pb               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 20. Magnesium            | Mg               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 21. Manganese            | Mn               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 22. Mercury              | Hg               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 23. Nickel               | Ni               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 24. Selenium             | Se               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 25. Silver               | Ag               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 26. Thallium             | Tl               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 27. Tin                  | Sn               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |
| 28. Zinc                 | Zn               | 02/17/2011 13:19 | 08/10/2011 10:42 | LEONEL GARCIA     |



## World Resources Company

8113 W. Sherman St.  
Tolleson, AZ 85353-4025

Tel: 800.972.1955  
Fax: 623.936.9164

August 22, 2011

Mr. Gerald Thompson  
Environmental Assistant  
Alaskan Copper Works  
3200 Sixth Avenue South  
Seattle, WA 98124

Dear Mr. Thompson:

In accordance with the recycling Agreement with your company, World Resources Company (WRC) provides a "RECYCLABLE MATERIAL PROFILE" (RMP) each contract year. Enclosed, for your records, is a completed RMP for the material generated at your plant. If a qualifier is indicated on the RMP, WRC has provided a quality assurance/quality control case narrative to validate the constituent's result(s).

The concentration of metals reported on the RMP is the total concentration of each metal on a dry basis. The recyclable material is prepared for analysis by first grid-sampling and then drying the selected sample in the laboratory oven at 103°-105° centigrade in order to obtain a homogeneous dry sample (Standard Methods For The Examination of Water and Wastewater, 15th Edition, published by the American Public Health Association 1980, Method 209A "Total Residue at 103°-105° centigrade"). Therefore, these results are generally higher than the concentrations of your material as it leaves your facility. You should multiply these dry concentrations by the decimal form of your percent solids (i.e. 50.0% = 0.50) to obtain the concentration of your material as it leaves your plant.

WRC appreciates your business and looks forward to a long and mutually beneficial recycling relationship. Please feel free to call me at (800) 972-1955 with any questions you may have regarding the enclosed RMP. Thank you for your interest in recycling.

Sincerely,

World Resources Company

Bryan Roberts  
Laboratory Manager

Enclosures